

WHAT IS CLAIMED IS:

1. An apparatus for processing information data and playback description data indicating a playback procedure of the information data, comprising:

modified information data processing means for newly generating modified information data by using part of the information data; and

description data processing means for modifying the playback procedure such that the modified information data are played back instead of the part of the information data, and modifying the content of the playback description data in accordance with the modified playback procedure,

wherein the playback description data comprises playback time information relating to the playback time of the information data, and wherein the description data processing means modifies the playback time information in accordance with the modified playback procedure.

2. An apparatus according to claim 1, wherein the playback time information indicates a playback start time or playback end time of the information data, and wherein the description data processing means modifies the playback start time or playback end time in accordance with the playback time of the modified information data.

3. An apparatus according to claim 2, wherein the description data processing means further generates restoration time information indicating an amount of modification of the playback start time or playback end time, and adds the restoration time information to the playback description data.

4. An apparatus according to claim 1, wherein the description data processing means further generates restoration information for restoring the playback procedure such that the part of the information data is played back instead of the modified information data, and adds the restoration information to the playback description data.

5. An apparatus according to claim 4, wherein the description data processing means again modifies the content of the playback description data by using the restoration information when the playback procedure is restored.

6. An apparatus according to claim 1, further comprising a recording means for recording the modified information data and the playback description data whose content has been modified in a recording medium in which the information data is recorded.

7. An apparatus according to claim 1, wherein the information data comprises encoded moving image data, and wherein the description data processing means modifies the content of the playback description data such that a playback start position or playback end position of the moving image data after the modification of the playback procedure corresponds to a boundary between units of encoding in the moving image data.

8. An apparatus according to claim 1, wherein the information data is recorded in a recording medium, and wherein the description data processing means modifies the content of the playback description data such that a playback start position or playback end position of the information data after the modification of the playback procedure correspond to units of access on the recording medium.

9. An apparatus according to claim 1, wherein the information data includes encoded moving image data, and wherein the modified information data processing means comprises decoding means for decoding the moving image data, combining processing means for performing a combining processing on a plurality of items of moving image data

decoded by the decoding means, and an encoding means for encoding moving image data obtained by the combining processing to thereby generate the modified information data.

10. An apparatus according to claim 1, wherein the modified information data processing means performs a modification processing on the part of the information data, and wherein the description data processing means further generates, in accordance with the modified playback procedure, section information indicating a section of the modified information data where the modification processing has been performed and adds the section information to the playback description data.

11. An apparatus for processing an information file having information data and playback description data indicating a playback procedure of the information file, comprising:

modified information data processing means for newly generating modified information data by using part of the information data to obtain a modified information file having the modified information data; and

description data processing means for modifying the playback procedure such that the modified information file is played back instead of the part of the information data

in the information file, and modifying the content of the playback description data in accordance with the modified playback procedure.

12. An apparatus according to claim 11, wherein the playback description data contains playback time information indicating a playback start time or playback end time of the information data, and wherein the description data processing means modifies the playback start time or playback end time in accordance with a playback time of the modified information data.

13. An apparatus according to claim 12, wherein the description data processing means further generates restoration time information indicating the amount of modification of the playback start time or playback end time, and adds the restoration time information to the playback description data.

14. An apparatus according to claim 11, further comprising a recording means for recording the modified information file and a playback description file having the playback description data whose content has been modified in a recording medium in which the information file is recorded.

15. An apparatus for processing playback description data containing an information data object designating a playback operation of information data and indicating a playback procedure of the information data, comprising:

instruction means for modifying the playback procedure such that modified information data generated by using part of the information data is played back instead of the part of the information data; and

description data processing means for adding, in accordance with the modified playback procedure, a modified information data object designating a playback operation of the modified information data to the playback description data, and for modifying playback time information for the information data included in the information data object.

16. An apparatus according to claim 15, wherein the playback time information indicates a playback start time or playback end time for the information data, and wherein the description data processing means modifies the playback start time or playback end time in accordance with a playback time of the modified information data.

17. An apparatus according to claim 16, wherein the description data processing means further generates restoration time information indicating the amount of

modification of the playback start time or playback end time, and adds the restoration time information to the information data object.

18. An apparatus according to claim 15, wherein an information modification processing is performed only in a part of the modified information data, and wherein the description data processing means further adds to the modified information data object section information indicating a section of the modified information data where the information modification processing has been performed.

19. An apparatus according to claim 15, wherein the description data processing means adds modified information data ID information for identifying the modified information data to the modified information data object.

20. An apparatus according to claim 19, wherein the description data processing means adds information indicating the type of modification processing performed on the modified information data as an attribute of the modified information data ID information.

21. A recording apparatus comprising:

description data generation means for generating

playback description data indicating a playback procedure of a plurality of items of information data and modified information data which is obtained by performing a modification processing on the information data;

section information generation means for generating section information indicating a section of the modified information data where the modification processing has been performed; and

a recording means for recording the playback description data and the section information in a recording medium.

22. An apparatus according to claim 21, wherein the section information is recorded by being incorporated into the playback description data.

23. An apparatus according to claim 21, wherein the information data includes image data, the modification processing includes a special effect processing on the image data, and the section information includes a start time or end time of the special effect processing within the modified information data.

24. An apparatus according to claim 21, wherein the information data includes image data, the modification



processing includes a combining processing for combining the image data and other data, and the section information includes a start time or end time of the combining processing within the modified information data.

25. An apparatus according to claim 21, wherein the information data is encoded, the modified information data is generated by using the encoding units as processing units, and the section where the modification processing is performed is determined independently of the processing units.

26. An apparatus according to claim 21, wherein the modified information data is generated by using the access units of a recording medium in which the information data is recorded, and the section where the modification processing is performed is determined independently of the processing units.

27. An apparatus according to claim 21, further comprising a display control means for displaying in a display unit, based on the section information, an image representing the section of the modified information data where the modification processing has been performed.

28. An apparatus for use in a system for playing back a plurality of items of information data and modified information data which is generated by using the information data as a material, in accordance with playback description data indicating a playback procedure for the plurality of items of information data and the modified information data, the apparatus comprising:

generation means for generating section information indicating a section in the modified information data in which information data different from the material information data are included; and

a recording means for recording in a recording medium the section information generated by the generation means.

29. A processing apparatus for processing a plurality of items of information data, modified information data obtained by performing a modification processing on the information data, and playback description data indicating a playback procedure for the information data and the modified information data, wherein said apparatus generates a section information indicating a section in the modified information data designated by the playback description data where the modification processing is provided by a generating circuit and records the section information in a recording medium together with the playback description data by a recording

circuit.

30. An apparatus for processing playback description data including an information file having information data and an information data object designating a playback operation of the information data, the playback description data further indicating a playback procedure of the information data, the apparatus comprising:

modified information data processing means for newly generating modified information data by using part of the information data and obtaining a modified information file having the modified information data;

instruction means for modifying the playback procedure such that the modified information data is played back instead of the part of the information data;

description data processing means for adding to the playback description data a modified information data object including section information indicating a section of the modified information data where the modification processing is provided, the modified information data object further designating a playback operation of the modified information data, wherein the description data processing means further modifies playback time information of the information data contained in the information data object; and

recording means for recording in a recording medium the

modified information file and the playback description data outputted from the description data processing means.

31. A method of processing information data and playback description data indicating a playback procedure of the information data, comprising:

modified information data generation processing step, of newly generating modified information data by using part of the information data;

description data control processing step, of modifying the playback procedure such that the modified information data is played back instead of the part of the information data, and modifying the content of the playback description data in accordance with the modified playback procedure,

wherein the playback description data contains playback time information relating to a playback time of the information data, and the playback time information is modified in accordance with the modified playback procedure in the description data control processing step.

32. A method according to claim 31, wherein the playback time information indicates a playback start time or playback end time of the information data, and the playback start time or playback end time is modified in accordance with a playback time of the modified information data in the

description data control processing step.

33. A method according to claim 32, wherein restoration time information indicating the amount of modification of the playback start time or playback end time is generated and added to the playback description data in the description data control processing step.

34. A method according to claim 31, wherein the description data control processing step generates restoration information for restoring the playback procedure such that the part of the information data is played back instead of the modified information data, and adds the restoration information to the playback description data.

35. A method according to claim 34, wherein the description data control processing step further modifies the content of the playback description data by using the restoration information in a playback procedure restoration processing.

36. A method according to claim 31, wherein the information data includes encoded moving image data, and the description data control processing step modifies the content of the playback description data such that a

playback start position or playback end position of the moving image data after the modification of the playback procedure corresponds to a boundary between units of encoding of the moving image data.

37. A method according to claim 31, wherein the information data is recorded in a recording medium, and the description data control processing step modifies the content of the playback description data such that a playback start position or playback end position of the information data after the modification of the playback procedure corresponds to access units on the recording medium.

38. A method according to claim 31, wherein the information data includes encoded moving image data, and the modified information data control processing step comprises a decoding processing for decoding the moving image data, a combining processing for performing a combining processing on a plurality of items of decoded moving image data, and an encoding processing for generating the modified information data by encoding the combined moving image data.

39. A method according to claim 31, wherein the modified information data control processing step performs a

modification processing on the part of the information data, generates, in accordance with the modified playback procedure, section information indicating a section of the modified information data where the modification processing has been provided, and adds the section information to the playback description data.

40. A method of processing an information file having information data, and playback description data indicating a playback procedure for the information file, comprising:

a modified information data generation processing step, of newly generating modified information data by using part of the information data, and obtaining a modified information file having the modified information data; and

a description data control processing step, of modifying the playback procedure such that the modified information file is played back instead of the part of the information data in the information file, and modifying the content of the playback description data in accordance with the modified playback procedure.

41. A method according to claim 40, wherein the playback description data comprises playback time information indicating a playback start time or playback end time of the information data, and the description data

control processing step modifies the playback start time or playback end time in accordance with a playback time of the modified information data.

42. A method according to claim 41, wherein the description data control processing step further generates restoration time information indicating the amount of modification of the playback start time or playback end time, and adds the restoration time information to the playback description data.

43. A method of processing playback description data including an information data object designating a playback operation of information data and indicating a playback procedure of the information data, comprising:

a modification processing step, of modifying the playback procedure such that modified information data generated by using part of the information data is played back instead of the part of the information data; and

a description data control processing step, in which, in accordance with the modified playback procedure, a modified information data object designating a playback operation of the modified information data is added to the playback description data, and playback time information of the information data included in the information data object



is modified.

44. A method according to claim 43, wherein the playback time information indicates a playback start time or playback end time of the information data, and the description data control processing step modifies the playback start time or playback end time in accordance with a playback time of the modified information data.

45. A method according to claim 44, wherein the description data control processing step further generates restoration time information indicating the amount of modification of the playback start time or playback end time, and adds the restoration time information to the information data object.

46. A method according to claim 43, wherein an information modification processing is provided only in a part of the modified information data, and the description data control processing step further adds to the modified information data object section information indicating a section of the modified information data where the information modification processing has been provided.

47. A method according to claim 43, wherein the

description data control processing step adds modified information data ID information for identifying the modified information data to the modified information data object.

48. A method according to claim 47, wherein the description data control processing step adds information indicating the type of an information modification processing performed on the modified information data as an attribute of the modified information data ID information.

49. A data processing method comprising:

a description data generation processing step, of generating playback description data indicating a playback procedure for a plurality of items of information data and modified information data which is obtained by performing an information modification processing on the information data;

a section information generation processing step, of generating section information indicating a section of the modified information data where the modification processing has been provided; and

an output processing step, of outputting the playback description data and the section information to a recording means, wherein the recording means records the playback description data and the section information in a recording medium.

50. A method for use in a system for playing back a plurality of items of information data and modified information data generated by using the information data as a material, in accordance with playback description data indicating a playback procedure for the plurality of items of information data and the modified information data, the method comprising:

a generation processing step, of generating section information indicating a section of the modified information data in which information data different from the material information data is are included; and

an output processing step, of outputting to a recording means the section information generated by the generation processing step, wherein the recording means records the section information in a recording medium.